Amendment to the Specification:

Please amend the title as follows:

~~METHOD OF~~ METHODS AND APPARATUSES FOR CHANGING DRIVING SEQUENCE TO OUTPUT CHARGE ~~COUPLE~~ COUPLED DEVICE SIGNAL

Please replace paragraph [0001] with the following replacement paragraph:

[0001] The invention relates in general to ~~method~~ methods of scanning and outputting a charge ~~couple~~ coupled device signal, and more particularly, to a method of outputting a charge ~~couple~~ coupled device signal by changing the period of the driving sequence.

Please replace paragraph [0002] with the following replacement paragraph:

[0002] In a normal color scanner, a color charge ~~couple~~ coupled device (CCD) is used as an optical sense device. The color charge ~~couple~~ coupled device is formed of several sensor cells to sense the intensities of the red (R), green (G) and blue (B) primary color lights. FIG. 1A shows a linear charge ~~couple~~ coupled device. The first row of sensor cells 102 of the linear charge ~~couple~~ coupled device is used to detect the R light intensity. The second row of sensor cells 104 is to detect the green light intensity, and the third row of sensor cells 106 is used to detect the blue light intensity. After a period of exposure time, different amounts of charges are accumulated according to the light intensities detected by the sensor cells. A charge signal formed by the charges is sent to a register within the period of a dump sequence. FIG. 2A shows the sequence of conventional linear charge coupled device signals. When the dump sequence SH is high, the charge signals of the first row of sensor cells 102 are sent to the register 108. Meanwhile, the charge signals of the second row of sensor cells 104 are sent to the register 110, and the charge signals of the third row of sensor cells 106 are sent to the register 112. According to FIG. 2A, in period T1 of driving signals ϕ 1 and ϕ 2 (using the rising edge of the signal as the data transmitting point), the register 108 sends the charge signal S1 to the pixel processing circuit 114. Similarly, in period T2, the charge signal S2 is sent to the pixel processing circuit 114. The charge signals in the register 108 are thus sequentially sent to the pixel processing circuit 114. During a pixel sampling sequence, the pixel processing circuit 114 sends

the charge signal S1 to a subsequent circuit at the period TS1, and sends the charge signal S2 to a subsequent circuit at the period TS2. Thereafter, the charge signals are sequentially output to the subsequent circuit. The registers 110, 112, and the pixel processing circuits 116 and 118 are similar to the above description.

Please replace paragraph [0004] with the following replacement paragraph:

[0003] In FIG. 1B, the stagger charge ~~couple~~ coupled device has six rows of sensor cells 122, 124, 126, 128, 130 and 132. The first and second rows of sensor cells 122 and 124 are to detect the red light intensities. The third and fourth rows of sensor cells 126 and 128 are to detect the green light intensities. The fifth and the sixth rows of sensor cells 130 and 132 are to detect the blue light intensities. After a certain exposure time, different amounts of charges are accumulated according to the light intensities detected by the sensor cells 122 to 132. FIG. 2B shows the sequence of the stagger charge ~~couple~~ coupled device signals. When the dump sequence SH is high, the charge signals of the first, second, third, fourth, fifth and sixth rows of sensor cells 122 to 132 are sent to the registers 134, 136, 138, 140, 142 and 144, respectively. In the period T11 of the driving sequences ϕ 1 and ϕ 2, the register 134 sends the charge signal S1 to the pixel processing circuit 146. The charge signal S3 is sent to the pixel processing circuit 146 in the period T12. The register 136 sends the charge signal S2 to the pixel processing circuit 146 in the period T21 of the driving sequences ϕ 1 and ϕ 2. The charge signal S4 is sent to the pixel processing circuit 146 in the period T22. Thereafter, the charge signals of the register 134 are sequentially sent to the pixel processing circuit 146. During the pixel sampling sequence, the pixel processing circuit 146 outputs the charge signals S1 and S2 to the subsequent circuit at the period TS1 and TS2, respectively. The registers 126, 128, 130, 132 and the pixel processing circuits 148 and 150 are similar to the above.

Please replace paragraph [0005] with the following replacement paragraph:

[0004] FIG. 3 shows a block diagram of a scanner. In FIG. 3, the sensor 302 converts the charge signal detected by the charge ~~couple~~ coupled device into an analog voltage signal. Using an analog/digital converter 304, the analog voltage signal output from the sensor 302 is converted into a digital voltage signal. An application

specified integrated circuit 306 and a compensation RAM 310 perform a calculation on the compensation value and the digital voltage signal. The calculated video signal is stored into a video RAM 308. The data of the image signal is then read from the video RAM 308 by the application specified integrated circuit 306, and sent to the I/O port 312.

Please replace paragraph [0005] with the following replacement paragraph:

[0005] When the scanner is scanning a video document, a high resolution is not always required. Without changing the scanner structure (that is, the amount of the sensor cells in each row of the charge ~~couple~~ coupled device, the sampling sequence of the analog/digital converter is changed. That is, the scanning optical resolution is reduced to one half, and the sampling sequence of the analog/digital converter is reduced to one half. Or alternatively, the scanning optical resolution is reduced to one quarter, and the sampling sequence of the analog/digital converter is reduced to one quarter. When the optical resolution of the scanner is reduced, and the sampling time of the analog/digital converter is not reduced, the scanning time of the scanner is not reduced, that is, the scanner does not have the function of high scanning speed at low optical resolution.

Please replace paragraph [0006] with the following replacement paragraph:

[0006] The invention provides a method of changing a driving sequence to output a charge ~~couple~~ coupled device applied to a scanner. The scanner has a pixel processor and a charge ~~couple~~ coupled device. According to the driving sequence, a plurality of charge signals detected by the charge ~~couple~~ coupled device is output to the pixel processor sequentially. The pixel processor then sequentially outputs the charge signals according to a sampling sequence. The method of changing the driving sequence to output the charge ~~couple~~ coupled device signal includes the following steps. A fast driving sequence is provided. The period of the fast driving sequence is 1/N of the period of the original driving sequence. During the fast driving sequence, the charge signal is sent to the pixel processor. The charge signal is then sampled at the pixel processor according to the sampling sequence. The

data obtained by sampling is output, such that the scanner possesses the high scanning speed function at a low optical resolution.

Please replace paragraph [0008] with the following replacement paragraph:

[0008] Figure 1A shows a linear charge ~~couple~~ coupled device;

Please replace paragraph [0009] with the following replacement paragraph:

[0009] Figure[[s]] 1B shows a stagger charge ~~couple~~ coupled device;

Pleas replace paragraph [0016] with the following replacement paragraph:

[0016] In this embodiment, a stagger charge ~~couple~~ coupled device is used as an example (the linear charge ~~couple~~ coupled device has different number of rows of sensor cells), of which the structure is illustrated as FIG. 2B. At the descending edge of the driving sequence, the register sends the charge signal to the video processor. After exposing the stagger charge ~~couple~~ coupled device within a period of time, different amounts of charges are accumulated according to the light intensity detected by the sensor cells. The charge signals formed by the charges are all sent to the register within a period of a dump sequence. In FIG. 4A, the period of the driving sequence is reduced to one half. When the dump sequence SH is high, the first row of sensor cells 122 outputs the charge signal to the register 134. The charge signals of the second row of the sensor cells 124 are sent to the register 136. Within the period T1 of the driving sequences ϕ 1, ϕ 2, the charge signal S1 is sent to the pixel processor 146, which then outputs the charge signal S1 to a subsequent circuit within the period T1 of the pixel sampling sequence. The register 134 sends the charge signal to the pixel processor 146 within the period T3 of the register 134. The pixel processor 146 outputs the charge signal S3 to the subsequent circuit within the period T3 of the pixel sampling sequence. The register 136 sends the charge signal S2 to the pixel processor 146 within the period T2 of the driving sequence ϕ 1, ϕ 2. The pixel processor 146 outputs the charge signal S2 to the

subsequent circuit within the period T2 of the pixel sampling sequence. The register 136 sends the charge signal S4 to the pixel processor 146 within the period T4 of the driving sequence ϕ 1, ϕ 2. The pixel processor 146 outputs the charge signal S4 to the subsequent circuit within the period T4 of the pixel sampling sequence. The subsequent sequence operation is similar.

Please replace paragraph [0024] with the following replacement paragraph:

[0026] According to the above, by changing the period of the driving sequence of the charge ~~couple~~ coupled device, the optical resolution of the scanner can be changed. A phase shift can be performed to the period of the driving sequence to determine which sensor cell is the initial position to output the charge signal thereof to the subsequent circuit.